Regional HIV/AIDS Epidemiologic Profile of Worcester, Massachusetts: 2011

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed while residing in another state before being reported in Massachusetts. As of January 1, 2011, this resulted in the removal of 2,297 HIV/AIDS cases, of which 739 have died and 1,558 were living. These persons living with HIV/AIDS may currently reside and receive care in the Commonwealth. The total number of persons living in Massachusetts with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS surveillance system. The cases are assigned to the state that reports the earliest date of AIDS diagnosis, if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the Massachusetts Department of Public Health (MDPH) HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males: those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 41% of recent HIV diagnoses among females are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2010 Worcester, Massachusetts²

	N	%
People Living with HIV/AIDS	917	60%
People Reported with HIV or AIDS who are Deceased	618	40%
Total Number of People Reported with HIV Infection or		
AIDS	1,535	100%

¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999
² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

Table 2. Average annual rate of HIV infection diagnosis from 2007 to 2009 and HIV/AIDS prevalence rate on 12/31/10¹: Worcester, Massachusetts²

Average annual HIV diagnosis rate from 2007–2009	Average rate per 100,000	Average annual number of HIV diagnoses
Worcester, MA	16.7	30.0
Massachusetts Total	9.4	607.3

HIV/AIDS prevalence rate		Number of people
on 12/31/10	Rate per 100,000	living with HIV/AIDS
Worcester, MA	509.9	917
Massachusetts Total	273.7	17,621

¹ The denominators for prevalence calculations are based on year 2005 population estimates from the MDPH Bureau of Health Statistics, Research and Evaluation.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/10

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and othe data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

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Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2000–2009, Worcester, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2000	700	47	EA
2000	708	17	54
2001	728	20	40
2002	780	22	74
2003	804	26	50
2004	825	28	49
2005	828	27	30
2006	858	19	49
2007	873	23	38
2008	883	15	25
2009	902	8	27

¹ Number of people living with HIV/AIDS on 12/31 of each year

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/11

²Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for

the most recently available 10 year period after the implementation of HIV infection reporting in 1999.
³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 4. People diagnosed with HIV infection from 2007–2009¹ and people living with HIV/AIDS on December 31, 2010 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Worcester, Massachusetts²

	HIV Infection Diag	noses	PLWH/A	
Gender:	N	%	N	%
Male	53	59%	536	58%
Female	37	41%	381	42%
Place of Birth:	N	%	N	%
US _	39	43%	494	54%
Puerto Rico/US Dependency ³	13	14%	216	24%
Non-US	38	42%	207	23%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	 ⁷	7	296	32%
Black (non-Hispanic)	39	43%	261	28%
Hispanic/Latino _	23	26%	343	37%
Other/Undetermined ⁴	7	 ⁷	17	2%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	22	24%	160	17%
Injection Drug Use (IDU)	14	16%	309	34%
MSM/IDU	7	7	34	4%
Heterosexual Sex	11	12%	179	20%
Other	 ⁷	7	20	2%
Total Undetermined	40	44%	215	23%
Presumed Heterosexual Sex ⁵	17 23	19%	104	11%
Undetermined ⁶ A		26%	111	12%
Age:	N	%	N	%
Hadaa 40	At Diagnosis	7	On December 31,	2010
Under 13 13 to 19	 ⁷	 ⁷	 ⁷	 -7
20 to 24	 7	8%	24	3%
25 to 29	8	9%	24 25	3%
30 to 34	14	16%	49	5%
35 to 39	19	21%	99	11%
40 to 44	11	12%	153	17%
45 to 49	13	14%	210	23%
50 to 54		10%	178	19%
55 to 59	9 ⁷	7	95	10%
60+	7	7	77	8%
Total	90	100%	917	100%
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¹Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

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³ Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto

Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency.

Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁶ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁷ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/11

Table 5. People living with HIV/AIDS on December 31, 2010 by gender and race/ethnicity: Worcester, Massachusetts¹

Male	Female		
N	%	N	%
202	38%	3	3
128	24%	133	35%
192	36%	151	40%
14	3%	 ³	 ³
536	100%	381	100%
	N 202 128 192 14	N % 202 38% 128 24% 192 36% 14 3%	N % N 202 38%3 128 24% 133 192 36% 151 14 3%3

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Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 6. People living with HIV/AIDS on December 31, 2010 by gender and exposure mode: Worcester, Massachusetts¹

	Male		Female		
Exposure Mode:	N	%	N	%	
	100	222/	N1/A	N 1/A	
Male-to-male sex (MSM)	160	30%	N/A	N/A	
Injection drug use (IDU)	192	36%	117	31%	
MSM/IDU	34	6%	N/A	N/A	
Heterosexual sex	45	8%	134	35%	
Other	10	2%	10	3%	
Total Undetermined	95	18%	120	31%	
 Presumed heterosexual sex² 	N/A	N/A	104	27%	
 Undetermined³ 	95	18%	16	4%	
Total	536	100%	381	100%	

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Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity.

³ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Worcester, Massachusetts¹, 2000–2009²

	Male		Female		
	N	%	N	%	Total
2000	37	69%	17	31%	54
2001	27	68%	13	33%	40
2002	46	62%	28	38%	74
2003	17	34%	33	66%	50
2004	24	49%	25	51%	49
2005	21	70%	9	30%	30
2006	27	55%	22	45%	49
2007	23	61%	15	39%	38
2008	12	48%	13	52%	25
2009	18	67%	9	33%	27

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Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Worcester, Massachusetts¹, 2000–2009²

	White	White NH		Black NH		Hispanic/Latino		Hispanic/Latino		Other/ Undetermined ³		
	N	%	N	%	N	%	N	%				
2000	15	28%	15	28%	24	44%	0	0%	54			
2001	10	25%	10	25%	17	43%	3	8%	40			
2002	22	30%	28	38%	23	31%	1	1%	74			
2003	13	26%	23	46%	13	26%	1	2%	50			
2004	16	33%	18	37%	15	31%	0	0%	49			
2005	8	27%	12	40%	9	30%	1	3%	30			
2006	7	14%	24	49%	15	31%	3	6%	49			
2007	12	32%	17	45%	8	21%	1	3%	38			
2008	7	28%	10	40%	7	28%	1	4%	25			
2009	5	19%	12	44%	8	30%	2	7%	27			

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² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Other/Undetermined includes Asian/Pacific Islander, American Indian/Alaska Native and people of unspecified race/ethnicity. NH = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Worcester, Massachusetts¹, 2000–2009²

	US	ļ	Puerto R US Depend	^	Non-U	S	
	N	%	N	%	N	%	Total
2000	24	44%	20	37%	10	19%	54
2001	15	38%	9	23%	16	40%	40
2002	38	51%	12	16%	24	32%	74
2003	18	36%	9	18%	23	46%	50
2004	20	41%	10	20%	19	39%	49
2005	13	43%	8	27%	9	30%	30
2006	16	33%	11	22%	22	45%	49
2007	4	4	 ⁴	4	20	53%	38
2008	12	48%	5	20%	8	32%	25
2009	12	44%	5	19%	10	37%	27

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Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Worcester, Massachusetts¹, 2000–2009²

	MS	M	ID	U	MS ID		НТ	SX	Oth	ner	Pre HTS			eter- ied ⁴	Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2000	10	19%	17	31%	5	5	12	22%	5	5	5	9%	8	15%	54
2001 2002	5 12	13% 16%	14 20	35% 27%	0 ⁵	0% ⁵	9 12	23% 16%	0 ⁵	0% ⁵	6 8	15% 11%	6 20	15% 27%	40 74
2003 2004	7 8	14% 16%	8 9	16% 18%	⁵	⁵	10 13	20% 27%	⁵	⁵	16 11	32% 22%	8 6	16% 12%	50 49
2005 2006	6 10	20% 20%	11	37% 14%	0 5	0%	 7	14%	0 5	0%	⁵	29%	7 10	23% 20%	30 49
2006 2007 2008	15 2	39% 8%	7 ⁵ 7	14% ⁵ 28%	5 5	⁵	7 4 5	14% 11% 20%	0	0% ⁵	14 10 ⁵	29% 26% ⁵	6 5	16% 20%	38 25
2009	5	19%	⁵	⁵	0	0%	⁵	2076 ⁵	5	5	5	5	12	44%	27

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² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Ninety-seven percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 3% were born in an unknown dependency.

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⁵ Numbers less than 5 for localities with populations of less than 50,000 are suppressed for the assurance of confidentiality.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres.

HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/11

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Worcester, Massachusetts¹, 2000–2009²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2000	17	54	31%
2001	16	40	40%
2002	25	74	34%
2003	17	50	34%
2004	20	49	41%
2005	11	30	37%
2006	16	49	33%
2007	18	38	47%
2008	13	25	52%
2009	11	27	41%

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before being reported in Massachusetts. ² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/11

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Worcester, Massachusetts, 1 2007–2009²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male Female	27 15	53 37	51% 41%
Race/Ethnicity:	N	N	%
White (non-Hispanic) Black (non-Hispanic) Hispanic/Latino Other/Undetermined ³	10 21 ⁵ ⁵	24 39 ⁵ ⁵	42% 54% ⁵ ⁵
Place of Birth:	N	N	%
US Puerto Rico/US Dependencies ⁴ Non-US Total	⁵ ⁵ 22 42	⁵ ⁵ 38 90	⁵ ⁵ 58% 47%

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